WHAT IS CLAIMED IS:

1. A method of processing a wafer, comprising:

providing a wafer having initial thickness variations between two surfaces of said wafer;

processing said wafer through a first module, said first module comprising apparatus for performing a grinding process, a clean process and a metrology process, and said processing therethrough includes said grinding process, said clean process and said metrology process;

defining an edge profile on said wafer; and

processing said wafer through a second module, said second module comprising apparatus for performing a double side polish (DSP) process, a clean process and a metrology process, and said processing therethrough includes said DSP process, said clean process and said metrology process.

2. The method of claim 1 wherein said first module processing further comprises an etch process, said etch process reducing said wafer thickness by less than about ten (10) microns.

3. The method of claim 1 wherein said first module processing precedes said defining said edge profile.

4. The method of claim 1 wherein said first and second modules each comprise a cluster tool defining a clean room environment.

5. The method of claim 1 wherein said first module metrology process is simultaneous with said grinding process.

6. The method of claim 5 wherein said first module metrology process produces a metrology profile for said wafer, said processing through said first module further comprising modifying said grinding process in response to said metrology profile.

7. The method of claim 1 wherein said first module metrology process is after said grinding process.

8. The method of claim 1 further comprising polishing said edge of said wafer after said defining said edge profile.

9. The method of claim 1 further comprising processing said wafer through a third module, said third module comprising apparatus for performing a finish polish process, a clean process and a metrology process, and wherein said processing through said third module comprises said finish polishing process, said clean process and said metrology process.

10. The method of claim 9 further comprising, after completion of said processing through said third module, providing said wafer directly to a process chamber for fabrication of a semiconductor device.

11. The method of claim 9 further comprising, in order after completion of said processing through said third module, cleaning said wafer, inspecting said wafer, packaging said wafer, and delivering said wafer to a wafer process facility for subsequent fabrication of a semiconductor device.

12. The method of claim 1 wherein said wafer has a total thickness variation (TTV) between said two surfaces of less than about 0.3 microns after said processing through said second module.

13. The method of claim 1 wherein said wafer has a SFQR of less than 0.12 microns after said processing through said second module.

14. The method of claim 1 further comprising processing said wafer through at least a portion of said first module prior to processing a second wafer through said first module.

15. The method of claim 1 further comprising laser marking said wafer prior to said defining said edge profile.

16. The method of claim 1 further comprising performing a donor anneal process prior to said defining said edge profile.

17. The method of claim 1, further comprising processing said wafer through a third module, said third module comprising apparatus for performing said defining said edge profile, and an edge polishing process, said processing through said third module comprising said defining said edge profile and said polishing said wafer edge.

18. A method of processing a wafer prior to device formation thereon, said method comprising, in order:

providing a wafer having first and second surfaces and a peripheral edge;

grinding said first and second wafer surfaces;

defining an edge profile of said wafer, and polishing said peripheral edge; and

polishing said first and second wafer surfaces.

19. A wafer processing system, comprising:

a grinder for grinding first and second wafer surfaces;

an etcher for etching said wafer;

a cleaner for cleaning said wafer; and

a metrology tester for testing a metrology of said wafer;

wherein said grinder, etcher, cleaner and metrology tester are contained within a first clean room environment.

20. The wafer processing system as in claim 19 further comprising a transfer mechanism adapted to transfer said wafer from said grinder to said etcher within said first clean room environment.

21. The wafer processing system as in claim 20 wherein said transfer mechanism comprises a robot.

22. The wafer processing system as in claim 19 further comprising a second clean room environment, said second clean room environment comprising:

an edge grinder for defining an edge profile of said wafer; and

an edge polisher for polishing said wafer edge.

23. The wafer processing system as in claim 19 further comprising a third clean room environment, said third clean room environment comprising:

a polisher for polishing said wafer;

a cleaner for cleaning said wafer; and

a metrology tester for testing said wafer metrology.

24. The wafer processing system as in claim 19 further comprising a fourth clean room environment, said fourth clean room environment comprising:

a finish polisher for polishing said wafer;

a cleaner for cleaning said wafer; and

a metrology tester for testing said wafer metrology.

25. A wafer processing system, comprising:

means for grinding said wafer;

means for cleaning said wafer;

means for testing a wafer metrology;

wherein said means for grinding, cleaning and testing are contained within a single clean room environment; and

means for transferring said wafer between said means for grinding and said means for cleaning, within said clean room environment.